

An originally filed Claim 1:

4. A shoring system comprising:
- a) linear rails having opposing sides, each said opposing side having an outer guide running along entire length of said linear rail and an inner guide running partially from the bottom up, each said outer guide and said inner guide being adapted to interlock shoring panels sliding vertically within, each said linear rail further comprising lengthwise an external edge guide ;
 - b) corner rails having oblique opposing sides, each said oblique opposing side having an outer guide running along entire length and an inner guide running partially from the bottom up, each said outer guide and said inner guide being adapted to interlock shoring panels sliding vertically within.
 - c) at least one strutting assemblies comprising a horizontal spreader and two vertical members, wherein each said vertical member being is adapted to cooperatively engage said edge guide of said linear rail and slide relatively.
 - d) shoring panels of equal design having laterally on either end an edge guide to interlock but slide vertically within said outer guide and said inner guide of said linear rail and said corner rail.

A market-up version of Claim 1:

(Currently amended) 1. A shoring system comprising:

- a) linear rails, each said linear rail having opposing sides, each said opposing side having an outer guide running along entire length of said linear rail and an inner guide running partially from the bottom up, [each] said outer guide and said inner guide being adapted to interlock shoring panels sliding vertically within, each said linear rail further comprising lengthwise an external edge guide ;
- b) [corner rails having oblique opposing sides, each said oblique opposing side having an outer guide running along entire length and an inner guide running partially from the bottom up, each said outer guide and said inner guide being adapted to interlock shoring panels sliding vertically within.]
- c) [at least one] strutting assemblies, each said strutting assembly comprising at least one [a] horizontal spreader and two vertical members, [wherein] each said vertical member being is

adapted to cooperatively engage **formlockingly** said edge guide of said linear rail **but** and slide relatively - ;

- d) shoring panels [of equal design], **each said shoring panel** having laterally on either end an edge guide to interlock but slide vertically within said outer guide and said inner guide of said linear rail [and said corner rail] .

A clean version of Claim 1:

(Currently amended) 1. A shoring system comprising:

- a) linear rails, **each said linear rail** having opposing sides, each said opposing side having an outer guide running along entire length of said linear rail and an inner guide running partially from the bottom up, said outer guide and said inner guide being adapted to interlock shoring panels sliding vertically within, each said linear rail further comprising lengthwise an external edge guide;
- b) strutting assemblies, **each said strutting assembly** comprising **at least one** horizontal spreader and two vertical members, each said vertical member being adapted to cooperatively engage **formlockingly** said edge guide of said linear rail **but** slide relatively;
- c) shoring panels, **each said shoring panel** having laterally on either end an edge guide to interlock but slide vertically within said outer guide and said inner guide of said linear rail.

An originally filed Claim 2:

4. The shoring system of claim 1 wherein said linear rail has a lower section and an upper section, said lower section being defined by the length of said inner guide covering 30% to 75% of total length of said linear rail and said upper section being defined as complementary to said lower section, such that:

said upper section comprising a back flange to press against wall of excavation, and a narrower front flange holding perpendicularly in between two identical lateral flanges spaced apart at distance comparable to but inferior than width of said front flange creating a particular box beam that has the back and front side projecting oppositely outward from lateral flanges;

said lower section comprising said back flange and said front flange, as per definition in said upper section and said lateral flanges narrower than in upper section, said lower section further comprising] an intermediary flange of practically same width as said back flange and at least two strips, said intermediary flange being weld on one side, onto said lateral flanges and on the other side, via two said strips onto said front flange, said strips being in alignment of said lateral flanges such that said front flange forms an edge guide frontally outward of said linear rail;

each said lateral flange having at distance quasi equal from said back flange and said intermediary flange a U-shaped member oriented with open section facing said lateral flange, said U-shaped member being weld parallel to said back flange and intermediary flange shaping respectively said outer guide and said inner guide;

said back flange having a locking bar of round or rectangular section welded onto each lip, interior to said outer guide, to interlock said shoring panels sliding within outer guide, said locking bar being total or partial to said outer guide;

said U-shaped member having, interior to said inner guide, a locking bar to interlock shoring panels sliding within said inner guide, said locking bar being total or partial relative to inner guide.

A marked-up version of Claim 2:

(Currently amended) 2. The shoring system of claim 1 wherein said linear rail has a lower section and an upper section, said lower section being defined by the length of said inner guide covering 30% to 75% of total length of said linear rail and said upper section being defined as complementary to said lower section, such that:

said upper section comprising a back flange [to press against wall of excavation,] and a [narrower] front flange holding perpendicularly in between two [identical] parallel lateral flanges spaced apart [at distance comparable to but inferior than width of said front flange] creating to shape altogether a particular box beam having that has said back flange and said front side flange projecting oppositely outward [from lateral flanges];

said lower section comprising in addition of said back flange, [and] said front flange, [as per definition in said upper section] and said lateral flanges [narrower than in upper

section] continuing from said upper section, [said lower section further comprising] an intermediary flange [of practically same width as said back flange] and at least two strips, the width of said lateral flanges being slightly narrower than in said upper section so that one side of said intermediary flange fastens ~~being weld~~ [on one side] onto said lateral flanges while the other side, ~~and on the other side~~ fastens, via two said strips, onto said front flange, said intermediary flange projecting oppositely outward of lateral flanges shaping with said back flange a channel structure on either side of said linear rail, said strips aligning in between or in continuation ~~being in alignment~~ of said lateral flanges shaping together with said front flange, a frontal edge guide positioned lengthwise externally [such that said front flange forms an edge guide frontally] ~~outward of~~ along said linear rail;

each said lateral flange having a separating member means projecting outward to shape in combination with said back flange and said intermediary flange respectively said outer guide and said inner guide [at distance quasi equal from said back flange and said intermediary flange a U-shaped member oriented with open section facing said lateral flange, said U-shaped member being weld parallel to said back flange and intermediary flange shaping respectively said outer guide and said inner guide];

said back flange having a locking bar [of round or rectangular section] welded onto each lip, interior to said outer guide, to interlock said shoring panels sliding within said outer guide, said locking bar running along entire length of ~~being total or partial to~~ said outer guide or partially;

said separating [U-shaped] member optionally having, interior to said inner guide, a locking bar to interlock shoring panels sliding within said inner guide, said locking bar running along entire length of ~~being total or partial relative to~~ said inner guide or partially.

A clean version of Claim 2:

(Currently amended) 2. The shoring system of claim 1 wherein said linear rail has a lower section and an upper section, said lower section being defined by the length of said inner guide covering 30% to 75% of total length of said linear rail and said upper section being defined as complementary to said lower section, such that:

said upper section comprising a back flange and a front flange holding perpendicularly in between two parallel lateral flanges spaced apart to shape altogether a particular box beam having said back flange and said front flange projecting oppositely outward;

said lower section comprising in addition of said back flange, said front flange, and said lateral flanges continuing from said upper section, an intermediary flange and at least two strips, the width of said lateral flanges being slightly narrower than in said upper section so that one side of said intermediary flange fastens onto said lateral flanges while the other side, fastens, via two said strips, onto said front flange, said intermediary flange projecting oppositely outward of lateral flanges shaping with said back flange a channel structure on either side of said linear rail, said strips aligning in between or in continuation of said lateral flanges shaping together with said front flange, a frontal edge guide positioned lengthwise externally along said linear rail;

each said lateral flange having a separating member means projecting outward to shape in combination with said back flange and said intermediary flange respectively said outer guide and said inner guide;

said back flange having a locking bar welded onto each lip, interior to said outer guide, to interlock said shoring panels sliding within said outer guide, said locking bar running along entire length of said outer guide or partially;

said separating member optionally having, interior to said inner guide, a locking bar to interlock shoring panels sliding within said inner guide, said locking bar running along entire length of said inner guide or partially.

An originally filed Claim 3:

3. A linear rail as set forth in claim 2 wherein rectangular structural tubes replace said U-shaped members.

A marked up version of Claim 3:

(Currently amended) 3. A linear rail as set forth in the claim 2 wherein [rectangular structural tubes replace said U-shaped members] the cross section of said separating member having a

U-shape or a rectangular shape is being fabricated by mean of cutting lengthwise a rectangular tube, bending a flat bar or joining together flat bars.

A clean version of Claim 3:

(Currently amended) 3. A linear rail as set forth in the claim 2 wherein **the cross section of said separating member having a U-shape or a rectangular shape is being fabricated by mean of cutting lengthwise a rectangular tube, bending a flat bar or joining together flat bars.**

An originally filed Claim 4:

4. The shoring system as set forth in claim 1, wherein said corner rail comprises:

a back flange to press against the wall of excavation and two identical structural channels held oppositely with their respective flanges looking outward, said back flange and each respective web of said structural channel being joined together to shape three faces of a hollow elongated polyhedron whose cross section is an isosceles triangle wherein the base is represented by said back flange, the legs by respective webs of said structural channels and the vertex angle taking any values between 15 and 90 degrees;

each said structural channel having a U-shaped member and a locking bar, said U-shaped member being oriented with the open section facing said structural channel and welded parallel to at equal distance from respective flanges of said structural channel shape thereby said outer guide and said inner guide with respectively rear and front flanges of said structural channel, said locking bar being weld onto the lip of rear flange of said structural channel, interior to said outer guide, to interlock said shoring panels sliding within, said locking bar being total or partial to said outer guide,

each U-shaped member having, interior to said inner guide, a said locking bar to interlock said shoring panels sliding within, said locking bar being total or partial relative said inner guide.

A market-up version of Claim 4:

(Currently amended) 4. The shoring system as set forth in claim 16 ~~1~~, wherein said corner rail comprises:

a back flange [to press against the wall of excavation] and two [identical] structural channels held oppositely with their respective flanges looking outward, said back flange and each respective web of said structural channel being joined together to shape three faces of a hollow elongated polyhedron whose cross section is an isosceles triangle wherein the base is represented by said back flange, the legs by respective webs of said structural channels and the vertex angle taking any values between 15 and 90 degrees; each said structural channel having a separating [U-shaped] member and a locking bar, said separating member means projecting outward to [U-shaped member being oriented with the open section facing said structural channel and welded parallel to at equal distance from respective flanges of said structural channel] shape [thereby] said outer guide and said inner guide with respectively rear and front flanges of said structural channel, said locking bar being weld onto the lip of rear flange of said structural channel, interior to said outer guide, to interlock said shoring panels sliding within, said locking bar running along entire length of ~~being total or partial to~~ said outer guide or partially; each separating [U-shaped] member optionally having, interior to said inner guide, a said locking bar to interlock said shoring panels sliding within, said locking bar running along entire length of ~~being total or partial relative~~ said inner guide or partially.

A clean version of Claim 4:

(Currently amended) 4. The shoring system as set forth in claim 16, wherein said corner rail comprises:

a back flange and two structural channels held oppositely with their respective flanges looking outward, said back flange and each respective web of said structural channel being joined together to shape three faces of a hollow elongated polyhedron whose cross section is an isosceles triangle wherein the base is represented by said back flange, the legs by respective webs of said structural channels and the vertex angle taking any values between 15 and 90 degrees; each said structural channel having a separating member and a locking bar, said separating member means projecting outward to shape said outer guide and said inner guide with respectively rear and front flanges of said structural channel, said locking bar being weld onto the lip of rear flange of said structural channel, interior to said outer

guide, to interlock said shoring panels sliding within, said locking bar running along entire length of said outer guide or partially;
each separating member optionally having, interior to said inner guide, a said locking bar to interlock said shoring panels sliding within, said locking bar running along entire length of said inner guide or partially.

An originally filed Claim 5:

5. A corner rail as set forth in claim 4 wherein rectangular structural tubes replace said U-shaped members.

A marked up version of Claim 5:

(Currently amended) 5. A corner rail as set forth in the claim 4 wherein [rectangular structural tubes replace said U-shaped members] the cross section of said separating member having a U-shape or a rectangular shape is being fabricated by mean of cutting lengthwise a rectangular tube, bending a flat bar or joining together flat bars.

A clean version of Claim 5:

(Currently amended) 5. A corner rail as set forth in the claim 4 wherein the cross section of said separating member having a U-shape or a rectangular shape is being fabricated by mean of cutting lengthwise a rectangular tube, bending a flat bar or joining together flat bars.

Claim 6 (Original)

6. A corner rail as set forth in claim 4 further including a reinforcing flange welded between flanges of respective said structural channels farthest from said back flange.

An originally filed Claim 7:

7. A corner rail as set forth in claims 4 further including an edge guide, said edge guide being adapted onto flanges of said structural channels farthest from said back flange.

A marked-up version of Claim 7:

(Currently amended) 7. A corner rail as set forth in claim 4 further including an edge guide means for sliding a said strutting assembly, said edge guide being adapted onto flanges of said structural channels farthest from said back flange.

A clean version of Claim 7:

(Currently amended) 7. A corner rail as set forth in claim 4 further including an edge guide means for sliding a said strutting assembly, said edge guide being adapted onto flanges of said structural channels farthest from said back flange.

Claim 8 (Original):

8. A corner rail as set forth in claim 6, wherein at said upper section, the flange of each said structural channel farthest from said back flange is cut close to its web to facilitate the insertion of panels within said inner guide.

An originally filed Claim 9:

9. A corner rail as set forth in claim 4, wherein:
at said upper section said structural channels are replaced by structural angles, said structural angle being oriented in alignment of said structural channels present in lower section of said corner rail, said upper section further comprising a front flange, said front flange joining on either end respective leg of each said structural angle, said upper section further including said U-shaped members and said locking bars as per their definition set forth in claim 4.

A marked-up version of Claim 9:

(Currently amended) 9. A corner rail as set forth in claim 4, wherein:
at said upper section said structural channels are replaced by structural angles, said structural angle being oriented in alignment of said structural channels present in lower section of said corner rail, said upper section further comprising a front flange, said front flange joining on either end respective leg of each said structural angle, said upper section further including said separating [U-shaped] members and said locking bars [as per their definition set forth in claim 4].

A clean version of Claim 9:

(Currently amended) 9. A corner rail as set forth in claim 4, wherein:

at said upper section said structural channels are replaced by structural angles, said structural angle being oriented in alignment of said structural channels present in lower section of said corner rail, said upper section further comprising a front flange, said front flange joining on either end respective leg of each said structural angle, said upper section further including said separating members and said locking bars.

Claim 10 (Withdrawn)

Claim 11 (Original)

11. A shoring system as set forth in claim 1, wherein the strutting assembly comprising said horizontal spreader and vertical members such that:

each said vertical member consisting of two identical lateral plates held parallel at upper and lower ends respectively by an upper plate and a lower plate, a supporting plate welded laterally on one end of said lateral plates, and an inner plate welded in between said lateral plates; said lateral plates projecting outward past said inner plate to shape a guide channel to cooperatively slide over said edge guide of said linear rail, each said lateral plate having further a strip or the lip bent inward, to interlock said edge guide of said linear rail, said lateral plates being provided on upper and lower ends with holes to mount at least two axles for installing rollers;

each said vertical member having further a segmental tube weld onto opposite face relative to guide channel, said segmental tube being provided with flanges to connect via bolts onto said horizontal spreader;

said horizontal spreader being a structural beam provided on either side with flanges to connect via bolts onto vertical members.

Claim 12 (Original)

12. A strutting assembly as set forth in claim 11, wherein said upper plate and said lower plate are provided with holes to allow the connection of two or more said strutting assemblies via vertical extension members, said vertical extension members having at upper and lower ends contact flanges with holes for bolting.

Claim 13 (Original)

13. A shoring panel as set forth in claim 1, wherein each said edge guide consists of a rectangular tube and a locking bar of round or rectangular section.

An originally filed Claim 14:

14. A shoring panel as set forth in claim 13, wherein said locking bar has either ends quasi flush to said rectangular tube and the center shifted inward at proportion comparable to diameter or width of said locking bar.

A marked-up version of Claim 14:

(Currently amended) 14. A shoring panel as set forth in claim 13, wherein said locking bar [has either ends quasi flush to said rectangular tube and the center shifted inward at proportion comparable to diameter or width of said locking bar] **welded along said rectangular tube means, for forming said edge guide, is slightly curved and has either extremity pointing laterally outward.**

A clean version of Claim 14:

(Currently amended) 14. A shoring panel as set forth in claim 13, wherein said locking bar **welded along said rectangular tube means, for forming said edge guide, is slightly curved and has either extremity pointing laterally outward.**

An originally filed Claim 15:

15. A shoring panel as set forth in claim 14 wherein said locking bar is partial relative to height of panel.

A marked-up version of Claim 15:

(Currently amended) 15. A shoring panel as set forth in claim 14 wherein said locking bar is [partial relative to height] **10% to 75% shorter than said rectangular tube of said edge guide.**

A clean version of Claim 15:

(Currently amended) 15. A shoring panel as set forth in claim 14 wherein said locking bar is **10% to 75% shorter than said rectangular tube of said edge guide.**

A New Claim 16:

16. The shoring system of claim 1 further comprising corner rails, each said corner rail having oblique opposing sides, each said opposing side having an outer guide running along entire length of said corner rail and an inner guide running partially from the bottom up, said outer guide and said inner guide being adapted to interlock said shoring panels sliding vertically within.

A new Claim 17:

17. A shoring system as set forth in the claim 1 further comprising:
mono-guide linear rails, each said mono-guide linear rail having opposing sides, each said opposing side having one guide, said guide being adapted to interlock said shoring panels sliding vertically within, each said mono-guide linear rail further comprising lengthwise an external edge guide means for sliding a said strutting assembly, said edge guide running entirely or partially along said mono-guide rail.

A new Claim 18:

18. A shoring system as set forth in the claim 1 further comprising:
mono-guide corner rails, each said mono-guide corner rail having oblique opposing sides, each said opposing side having one guide, said guide being adapted to interlock said shoring panels sliding vertically within.

A new Claim 19:

19. A corner rail to be used in combination with large shoring panels for supporting the walls of open excavations of polygonal shape wherein:
corner rail means, to be arranged on each corner of the excavation for supporting said shoring panels using two structural channels means, for forming two oblique opposing sides means, for shaping an angle of value between 15 and 90 degrees, provided with

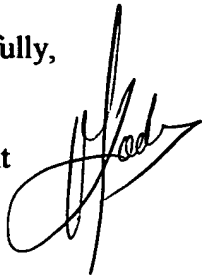
separating members means, for shaping guides means, for sliding vertically said shoring panels.

Note : In the final form, claim 16 must come before claim 4 since claim 4 refers to claim 16. Therefore, reordering of claims may be needed.

CONCLUSION

Applicant submits that the specifications and claims are now in proper form. Therefore, Applicant submits that this application is now in condition for allowance, which action he respectfully solicits.

Very respectfully,
Max Kadiu,
The Applicant

A handwritten signature in black ink, appearing to read 'Max Kadiu', written over the typed name.

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